

Raley v. Hyundai Motor Company  
Deposition of Charles P. Dickerson - 11/13/2009

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IN THE UNITED STATES DISTRICT COURT FOR THE  
WESTERN DISTRICT OF OKLAHOMA

(1) MISTY RALEY, Individually, )  
and (2) Misty Raley, as Parent )  
and Next Friend of C.G., W.G., )  
and C.G., minor children, )

Plaintiffs, )

v. )

No. CV5:08-cv-00376

(1) HYUNDAI MOTOR COMPANY, )  
LTD., a Korean corporation; and )  
(2) HYUNDAI MOTOR AMERICA, a )  
California corporation, )

Defendants. )

DEPOSITION OF CHARLES P. DICKERSON

Phoenix, Arizona  
November 13, 2009  
9:40 a.m.

Prepared by:  
Janet Hauck, RPR  
Arizona Certified  
Reporter Number 50522

EXHIBIT

7

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4	CHARLES P. DICKERSON	
5	Examination By Mr. Teague:	4
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8	EXHIBITS	
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	EXHIBIT	DESCRIPTION PAGE
10	1	Letter from Charles Dickerson to John Merritt, 8/9/07, with attachment
11	2	Letter from Charles Dickerson to John Merritt, 8/28/07, with attachment
12	3	Letter from Charles Dickerson to John Merritt, 9/11/07
13	4	Letter from Charles Dickerson to John Merritt, 9/2/09, with attachment
14	5	Letter from Charles Dickerson to John Merritt, 9/14/09
15	6	Speed Calculation Case 3708
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1 DEPOSITION OF CHARLES P. DICKERSON

2 was taken on November 13, 2009, commencing at 9:40 a.m.,

3 at the offices of Legal Video Specialists, 3033 North

4 Central Avenue, Suite 100, Phoenix, Arizona, before

5 JANET HAUCK, RPR, a Certified Reporter, Certificate

6 No. 50522, for the State of Arizona.

7

8 APPEARANCES:

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24

25

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1 CHARLES P. DICKERSON,

2 called as a witness herein having been first duly sworn

3 by the Certified Reporter to tell the whole truth and

4 nothing but the truth, was examined and testified as

5 follows:

6

7 EXAMINATION

8 BY MR. TEAGUE:

9 Q. Mr. Dickerson, my name is Derrick Teague. I

10 represent Hyundai in this matter. I understand you've

11 done some additional work and you've done some

12 additional reports since your last deposition; is that

13 correct?

14 A. That's correct.

15 Q. Can you tell me -- so that I make sure that

16 I'm oriented to what is new. Your last deposition was

17 September 29th, 2006; is that right?

18 A. That sounds correct.

19 Q. Okay. Since then --

20 A. Hang on, let me -- yes, that's correct. No.

21 Hold on.

22 Q. No, that's --

23 A. That's incorrect. My last deposition was

24 June 13th, 2007.

25 Q. Correct.

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1 A. Can you hear me all right?

2 Q. All right. Yes, sir.

3 A. Okay.

4 Q. All right. Since that deposition, I have a

5 report dated August 9th, 2007, a report dated

6 September 11th, 2007, a report dated September 2nd,

7 2009, and then one dated September 14th, 2009. Are

8 there any other reports?

9 A. There should be an August 28th, 2007.

10 Q. August 28th, 2007. Okay. Let me start going

11 through those. We'll identify it.

12 A. There would have been a copy of that in my

13 file if you don't have one in yours.

14 Q. All right, sir. Thank you. Just in brief

15 tell me what the August 27 -- or 28th, 2007 report deals

16 with.

17 A. As part of generating the motion files for,

18 the animation, I refined my analysis a little bit, and

19 that's what that report was.

20 MR. COX: It's about ten pages down from

21 the top of his file.

22 THE WITNESS: The top section in what I

23 sent you is a complete set of what I have as my reports

24 in this file.

25 Q. BY MR. TEAGUE: All right. Give me a second.

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1 because I don't know that I've seen that one. Are you  
 2 -- let's -- have any of these -- have any of these  
 3 reports been marked as exhibits previously? They have  
 4 not; have they?  
 5 A. I don't know.  
 6 Q. Well, let's -- let's start with your  
 7 August 9th, 2007 report and mark it as Exhibit 1.  
 8 (Exhibit No. 1 was marked.)  
 9 Q. BY MR. TEAGUE: Did that report have with it  
 10 some diagrams?  
 11 A. Yes, sir, it did. It had one diagram.  
 12 Q. All right. So, your August 9th, '07 report  
 13 is a total of three pages?  
 14 A. Yes, sir.  
 15 Q. All right.  
 16 A. Hold on. There were -- I'm sorry. There  
 17 were two diagrams.  
 18 Q. Okay. So, it's a total of four pages?  
 19 A. Yes, sir, a total of four pages.  
 20 Q. Your September 11th, 2000 report, let's mark  
 21 it as Number 2.  
 22 MR. COX: If you want to go in order, the  
 23 August 28th is next.  
 24 MR. TEAGUE: Oh, yes. Let's do the  
 25 August 28 one Exhibit --

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1 Q. BY MR. TEAGUE: How many pages is your August  
 2 28th report?  
 3 A. Four pages.  
 4 (Exhibit No. 2 was marked.)  
 5 (Exhibit No. 3 was marked.)  
 6 Q. BY MR. TEAGUE: September 11th, '07,  
 7 Number 3, was it two pages, sir?  
 8 A. Yes, sir.  
 9 Q. The September 2nd, 2009, is that the next  
 10 report in order?  
 11 A. Yes, sir.  
 12 Q. We'll mark it 4.  
 13 A. And it's three pages.  
 14 (Exhibit No. 4 was marked.)  
 15 THE WITNESS: I'm sorry. I can't count  
 16 today. It's four pages.  
 17 Q. BY MR. TEAGUE: The last one, I believe, is  
 18 September 14th, 2009?  
 19 A. Yes, sir.  
 20 Q. And that would be Number 5.  
 21 A. It's one page, Number 5.  
 22 (Exhibit No. 5 was marked.)  
 23 Q. BY MR. TEAGUE: Are all of those -- are all  
 24 of those the reports that you created since your last  
 25 deposition?

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1 A. Yes, sir.  
 2 Q. Have you created any other documents,  
 3 diagrams, anything of that nature, other than what we've  
 4 gone through here in 1 through 5?  
 5 A. Yes, sir, I have.  
 6 Q. What else would there be?  
 7 A. If you were to go to -- I have it marked as  
 8 Tab Number 3. So, I'd be I think the fourth section of  
 9 that stack of documents you have. It starts out first  
 10 page as Speed Calculation at the top. That is or  
 11 comprises -- that section comprises my calculations that  
 12 I use to generate the motion file or key frames for the  
 13 animation. If you get into photographs, you've gone too  
 14 far.  
 15 Q. All right. It's speed calculations case  
 16 3708.  
 17 A. Yes, sir, that -- that whole section.  
 18 Q. This entire section is new -- new work  
 19 product of yours?  
 20 A. Yes, sir, it is.  
 21 Q. Including the photographs?  
 22 A. There shouldn't be any photographs in that  
 23 section.  
 24 Q. Okay.  
 25 A. Well, I'm sorry. There -- there are two.

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1 screen captures. They would look like photographs.  
 2 Yes, those are included. Those are screen captures  
 3 provided me by the animator.  
 4 Q. Is the last page of that section, does it  
 5 have a calculation of T equals 150 equals 1/2 AT  
 6 squared; is that the last page of that section?  
 7 A. Yes, sir.  
 8 MR. TEAGUE: Okay. So, let's mark that  
 9 as Exhibit Number 6.  
 10 (Exhibit No. 6 was marked.)  
 11 THE WITNESS: Do you want to number the  
 12 pages in it?  
 13 Q. BY MR. TEAGUE: Well, if we numbered them, it  
 14 would assume that your order is the same order as mine.  
 15 A. Right.  
 16 Q. So, let's -- we can hold off on that for the  
 17 moment. How many total pages are there?  
 18 A. I'm going to guess there's 15 or 20. I  
 19 haven't counted them. I count 22. The first  
 20 admonishment is not to guess.  
 21 Q. That's what I counted, as well.  
 22 A. Okay. And I'm sorry. That's Exhibit 6?  
 23 Q. Yes, sir.  
 24 A. I'm going place the exhibit number on the  
 25 page that says, "Speed Calculation 3708," which was the

3 (Pages 6 to 9)

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<p>1 <u>top page on mine.</u></p> <p>2 Q. Yes, sir.</p> <p>3 A. <u>There are probably a few other things that</u></p> <p>4 <u>are new to my file since my last deposition.</u></p> <p>5 Q. All right. What else?</p> <p>6 A. Do we want to just go through and kind of</p> <p>7 make a catalog?</p> <p>8 Q. Yeah. I'm -- I'm -- I wasn't familiar with</p> <p>9 Exhibit 6. And so, if you can go through the remainder</p> <p>10 of the materials and tell me what's new since your last</p> <p>11 deposition, I can determine whether I've seen that</p> <p>12 before or not.</p> <p>13 A. In what is my Section 6, I've included a copy</p> <p>14 of a publication done by Lawrence Wilson and Michael</p> <p>15 Gilbert. And that's the document that's referred to in</p> <p>16 my August 28th report. That would not have been in</p> <p>17 there prior. I also, since then --</p> <p>18 Q. Let me find that one.</p> <p>19 A. All right.</p> <p>20 Q. My sections aren't numbered, so I have to --</p> <p>21 A. Right, I'm sorry. I should have done that</p> <p>22 when I produced it. It would have made this easier. It</p> <p>23 would be the eighth one down. It's the only section</p> <p>24 that has anything that looks like publications,</p> <p>25 literature. Starts out with some handwritten notes at</p>	<p>1 bottom note where I just -- at the very bottom where you</p> <p>2 can see it's a little different writing, I'm using a</p> <p>3 different pencil. Underneath the line on that page I</p> <p>4 know I added since then, because at the last deposition</p> <p>5 I hadn't read that paper.</p> <p>6 Q. Okay. And that's referring to the article of</p> <p>7 Reconstruction and Analysis of Steering-Induced,</p> <p>8 On-Road, Untripped SUV; is that right?</p> <p>9 A. Yes, sir.</p> <p>10 Q. Is that right?</p> <p>11 A. Yes, sir.</p> <p>12 Q. Why don't we mark that Number 7.</p> <p>13 A. The paper?</p> <p>14 Q. Yes. That's the only new material; isn't it?</p> <p>15 A. Yes, sir. Okay. I've got it marked as</p> <p>16 Number 7.</p> <p>17 (Exhibit No. 7 was marked.)</p> <p>18 Q. BY MR. TEAGUE: Is there anything else that's</p> <p>19 new or in addition to --</p> <p>20 A. Well, since that time, I have reviewed</p> <p>21 Dr. Germane's deposition and his file. I don't recall</p> <p>22 if I did that before. I don't believe so. His</p> <p>23 deposition was on July 9th of '07. Yeah. So, I would</p> <p>24 have reviewed that after my last deposition.</p> <p>25 Q. All right.</p>
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<p>1 the top.</p> <p>2 Q. At the top it says, "Roll Distance."</p> <p>3 A. Literature review, yes, sir, that's the</p> <p>4 section. The first -- first article in there is</p> <p>5 actually Exhibit 21 from my October 5th deposition.</p> <p>6 Q. Okay.</p> <p>7 A. And then behind that one is this new paper.</p> <p>8 Q. Analyzing the Trip Phase of Soft Soil</p> <p>9 Rollovers?</p> <p>10 A. No, the next one. Reconstruction Analysis of</p> <p>11 Steering Induced On Road.</p> <p>12 Q. This one?</p> <p>13 A. Yes, sir. That's the last page. So, it's</p> <p>14 the documents before that or the pages before that.</p> <p>15 Q. So, is this whole section here new work, as</p> <p>16 well?</p> <p>17 A. No. I think -- I think except for the review</p> <p>18 of that last paper, I did that work prior to my last</p> <p>19 deposition. I know I reviewed the 980022 paper because</p> <p>20 it has a deposition exhibit attached to it.</p> <p>21 Q. Yes, sir, I recall seeing that. Had you --</p> <p>22 these documents here, the start of this section that you</p> <p>23 have roll distance, had those -- had those notes been</p> <p>24 prepared?</p> <p>25 A. I thought they had, but I am not sure. The</p>	<p>1 A. That's a whole section, my Section 10.</p> <p>2 Q. Do you have any notes or anything like that,</p> <p>3 or is that just his copy of his deposition?</p> <p>4 A. It has my notes. I have several pages of</p> <p>5 handwritten notes and then copies of materials from his</p> <p>6 file. Actually, the next two sections are new, because</p> <p>7 I also have a copy of his most recent report,</p> <p>8 September 30th, 2009.</p> <p>9 Q. The first section -- well, let me stop and</p> <p>10 check. The notes that you have with respect to</p> <p>11 Dr. Germane, do those have any of your opinions in them,</p> <p>12 or are you just taking notes on what his deposition</p> <p>13 testimony is?</p> <p>14 A. These are just notes on what his testimony</p> <p>15 was.</p> <p>16 Q. Do your notes contain any criticisms or</p> <p>17 things of that nature with respect to his testimony?</p> <p>18 A. Not in those notes, no, sir.</p> <p>19 Q. Okay. Do you have notes somewhere where</p> <p>20 you've analyzed his opinion at his deposition?</p> <p>21 A. I don't believe I have -- I don't have</p> <p>22 anything written down. I have his materials. Then I</p> <p>23 have a drawing where I have put some of his measurements</p> <p>24 into my drawing. That's the very top of the next</p> <p>25 section. No. Keep going. That's -- that's one of his</p>

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<p>1 exhibits. Yes, sir, that's it.</p> <p>2 Q. Would this be Number 8 if we marked the</p> <p>3 drawing?</p> <p>4 A. Yes, sir, it would be.</p> <p>5 MR. COX: Did you mark Germane's depo</p> <p>6 notes that he made?</p> <p>7 MR. TEAGUE: No, I didn't. Do you want</p> <p>8 me to?</p> <p>9 MR. COX: If you want.</p> <p>10 MR. TEAGUE: I'll be happy to. No, I</p> <p>11 didn't mark the notes.</p> <p>12 Q. BY MR. TEAGUE: Why don't we mark the</p> <p>13 notes -- German deposition notes. Let's mark it</p> <p>14 Number 8.</p> <p>15 A. Do you want that as 8?</p> <p>16 Q. Yeah. And then we'll mark the drawing that</p> <p>17 you referenced as Number 9.</p> <p>18 A. I took some photographs of the undercarriage</p> <p>19 of this vehicle that are -- a portion of which are</p> <p>20 contained in one of the September reports, one of the</p> <p>21 newer reports.</p> <p>22 Q. Yes, sir.</p> <p>23 A. Those are included in yours, and they're at</p> <p>24 the back of my photographs in my Section 4. You'll know</p> <p>25 they're -- they're marked underneath two to a page as</p>	<p>1 A. I have these four depositions. One is of</p> <p>2 Jack Gill, Casey Garza, Chelsea Garza and Wesley Garza.</p> <p>3 And I -- I supplied the cover page. I didn't copy the</p> <p>4 whole thing. I do have Misty Raley's deposition, but I</p> <p>5 didn't think you guys needed another copy of it in the</p> <p>6 file.</p> <p>7 Q. Are you saying that the front cover page of</p> <p>8 those depositions are included in here?</p> <p>9 A. No, sir. I just received these depositions</p> <p>10 last night.</p> <p>11 Q. Have you reviewed those depositions?</p> <p>12 A. Yes, sir, I have.</p> <p>13 Q. And who is Jack Gill?</p> <p>14 A. Jack Gill is a stunt driver, a professional</p> <p>15 driver that Mr. Merritt hired to do some testing.</p> <p>16 Q. And what exactly do you have -- do you have a</p> <p>17 deposition of him?</p> <p>18 A. I have a deposition, and I have DVDs of his</p> <p>19 work of the testing that he did.</p> <p>20 Q. Okay. What deposition -- is that a</p> <p>21 deposition in this case?</p> <p>22 A. Yes, sir.</p> <p>23 Q. Okay. What's the date on it?</p> <p>24 A. August 30th, 2007.</p> <p>25 Q. Have you read those materials and reviewed</p>
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<p>1 3708 undercarriage in the photos 1 through 25. My</p> <p>2 original set of photographs is marked as Exhibit 19 in</p> <p>3 my December 5, '06 deposition.</p> <p>4 Q. This is your Section 4?</p> <p>5 A. Yes, sir.</p> <p>6 Q. These photographs?</p> <p>7 A. Yes, sir. Those are them.</p> <p>8 Q. And these are new photographs of the</p> <p>9 undercarriage since your last deposition?</p> <p>10 A. Yes, sir.</p> <p>11 Q. What number are we on now? 10?</p> <p>12 A. I have 10.</p> <p>13 MR. TEAGUE: Let's mark those</p> <p>14 photographs -- there's 25 of them -- Exhibit Number 10.</p> <p>15 (Exhibit No. 10 was marked.)</p> <p>16 THE WITNESS: I guess the last -- there</p> <p>17 are some other materials that are new since then that</p> <p>18 are not included in this notebook.</p> <p>19 Q. BY MR. TEAGUE: Do you have other materials</p> <p>20 with you that aren't in the materials that I have here?</p> <p>21 A. No. You have -- well, I do.</p> <p>22 Q. Oh.</p> <p>23 A. I have four depositions that are not included</p> <p>24 in those materials.</p> <p>25 Q. Okay. What four depositions are they?</p>	<p>1 them?</p> <p>2 A. Yes, sir, I have.</p> <p>3 Q. Have you read the -- did you say Casey,</p> <p>4 Chelsea and Wesley Garza?</p> <p>5 A. Yes, sir.</p> <p>6 Q. Have you read those depositions?</p> <p>7 A. Yes, sir, I have.</p> <p>8 Q. All right.</p> <p>9 A. At the back of your data set there, I made</p> <p>10 photocopies of the CDs and DVDs that I have in this</p> <p>11 file, some of which are new since my last deposition.</p> <p>12 Q. What section is that, sir?</p> <p>13 A. The very last or the second to last. The</p> <p>14 very last, I think, is a large drawing. Should have</p> <p>15 been a drawing, a folded drawing in there someplace</p> <p>16 either at the top or the bottom. That's it.</p> <p>17 Q. Is this new? Is this a new drawing or is</p> <p>18 this --</p> <p>19 A. Yes, it is. That's an enlargement of the</p> <p>20 drawing that is part of that August 28th, '07 report.</p> <p>21 Q. <u>Are there any DVDs -- I'm looking at the</u></p> <p>22 <u>copies of the DVDs that you have.</u></p> <p>23 A. <u>Yes, sir.</u></p> <p>24 Q. <u>Are there DVDs or discs here that you have</u></p> <p>25 <u>information that you had not seen or -- prior to your</u></p>

5 (Pages 14 to 17)

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<p>1 <u>last deposition?</u></p> <p>2 A. <u>Yes, sir.</u></p> <p>3 Q. <u>Can you tell me which ones those are?</u></p> <p>4 A. <u>Those are the ones that describe the testing.</u></p> <p>5 <u>There's two sets of tests. One is a drop test, both</u></p> <p>6 <u>with an OEM and then a modified vehicle, and then</u></p> <p>7 <u>another set is a rollover drop test, the JRS test. I</u></p> <p>8 <u>had not seen those.</u></p> <p>9 Q. <u>I see the JRS -- I'm sorry. Go ahead.</u></p> <p>10 A. <u>Then -- I'm sorry. The bumper strike test</u></p> <p>11 <u>with Jack Gill, I had not seen those. The rest I had</u></p> <p>12 <u>seen. Well, that's not true. There's also that I had</u></p> <p>13 <u>not seen the video of Dr. Germane's deposition.</u></p> <p>14 Q. <u>All right. I found one of the -- one of the</u></p> <p>15 <u>CDs that you were referring to that you had not seen</u></p> <p>16 <u>before, but I'm not sure that I've identified the others</u></p> <p>17 <u>here. Photographs of the rear bumper of the exemplar;</u></p> <p>18 <u>had you seen that?</u></p> <p>19 A. <u>I'm sorry. That was broken up.</u></p> <p>20 Q. <u>Photographs of the rear bumper of the</u></p> <p>21 <u>exemplar '99 Hyundai Sonata; had you seen that?</u></p> <p>22 A. <u>Yes, sir -- no. I don't think I'd seen that</u></p> <p>23 <u>before my last one. Hang on. Let me find that one.</u></p> <p>24 Q. <u>Why don't -- I guess let's try to cut down on</u></p> <p>25 <u>going through all on them.</u></p>	<p>1 A. <u>Yes, sir.</u></p> <p>2 Q. <u>Is that -- is that the case, as we sit here</u></p> <p>3 <u>today, that you have returned to your opinions of your</u></p> <p>4 <u>original testimony in your first deposition?</u></p> <p>5 A. <u>Fundamentally, that's true, but I have</u></p> <p>6 <u>refined them through the work I did to generate the</u></p> <p>7 <u>animation. So, really, the final opinions are in the</u></p> <p>8 <u>August 28th report which includes a slight change in the</u></p> <p>9 <u>path and then some slight changes in the speeds to</u></p> <p>10 <u>reflect that path. And then as part of the animation</u></p> <p>11 <u>work I generated some roll rate calculations that I had</u></p> <p>12 <u>not done before. So, those are additional opinions.</u></p> <p>13 Q. <u>So, your refined or new opinions, are all of</u></p> <p>14 <u>those expressed in Exhibit Number 2?</u></p> <p>15 A. <u>Yes, sir.</u></p> <p>16 Q. <u>That's the one I have not seen before, so</u></p> <p>17 <u>give me a minute to go through that.</u></p> <p>18 A. <u>Certainly.</u></p> <p>19 Q. <u>Have you -- you've told me what additional</u></p> <p>20 <u>documents you reviewed. Have you interviewed or spoken</u></p> <p>21 <u>to anyone to help you refine or provide your final</u></p> <p>22 <u>opinions such as the highway patrolman or any witnesses</u></p> <p>23 <u>or other experts?</u></p> <p>24 A. <u>As part of generating the animation, of</u></p> <p>25 <u>course, I had quite a few conversations with Mr. Brad</u></p>
Page 19	Page 21
<p>1 A. <u>Sure, I understand.</u></p> <p>2 Q. <u>But whatever is the easiest way -- whatever</u></p> <p>3 <u>is the easiest way for you to tell me what you had not</u></p> <p>4 <u>seen before.</u></p> <p>5 A. <u>All right. I unfortunately don't have these</u></p> <p>6 <u>in the same order that you're looking at them. I had</u></p> <p>7 <u>not seen any of the testing. So, any of them that</u></p> <p>8 <u>described testing -- there are three tests in there.</u></p> <p>9 <u>There's two drop tests. There's two that are JRS tests,</u></p> <p>10 <u>and then -- I think it's a three-disc set. Hang on and</u></p> <p>11 <u>I'll make sure I've got that correct. And then there's</u></p> <p>12 <u>one, two, three discs that are part of the testing done</u></p> <p>13 <u>by Jack Gill. I also had not seen the deposition of</u></p> <p>14 <u>Dr. Germane or his file materials. I think that's it.</u></p> <p>15 Q. <u>All right. Any other new materials?</u></p> <p>16 A. <u>No, sir.</u></p> <p>17 Q. <u>That's a fair amount of new stuff. So, we</u></p> <p>18 <u>may have to take longer than I planned.</u></p> <p>19 A. <u>Okay.</u></p> <p>20 Q. <u>But as I read in one of your reports, I</u></p> <p>21 <u>believe -- let me find it so I read it correctly. You</u></p> <p>22 <u>had stated that you had returned to your original</u></p> <p>23 <u>opinions that you gave in your first deposition. I</u></p> <p>24 <u>think that's your August 9th, '07 report which would be</u></p> <p>25 <u>Exhibit 1.</u></p>	<p>1 Matheson.</p> <p>2 Q. <u>Besides Matheson, anyone else?</u></p> <p>3 A. <u>But besides him, no, sir, I have not. And I</u></p> <p>4 <u>have not talked to any witnesses, and I haven't talked</u></p> <p>5 <u>to the police officer since the day I spent with him</u></p> <p>6 <u>before my deposition.</u></p> <p>7 Q. <u>I'm sorry. I cut you off. I apologize.</u></p> <p>8 A. <u>That's okay.</u></p> <p>9 Q. <u>Have you been back to the accident scene?</u></p> <p>10 A. <u>No, sir.</u></p> <p>11 Q. <u>You have inspected the vehicle again?</u></p> <p>12 A. <u>I have, yes, sir.</u></p> <p>13 Q. <u>How many times since your last deposition?</u></p> <p>14 A. <u>I think I've seen it twice since my last</u></p> <p>15 <u>deposition.</u></p> <p>16 Q. <u>Why were you inspecting the vehicle again</u></p> <p>17 <u>after your -- you had previously inspected it; hadn't</u></p> <p>18 <u>you?</u></p> <p>19 A. <u>Oh, absolutely. It may have been just -- it</u></p> <p>20 <u>may have been just once. I don't recall specifically</u></p> <p>21 <u>what dates I was there, but once or twice.</u></p> <p>22 Q. <u>Okay. Once or twice, whatever the number is,</u></p> <p>23 <u>what was the purpose of the additional inspections?</u></p> <p>24 A. <u>The purpose was to look at the underside of</u></p> <p>25 <u>the vehicles more closely.</u></p>

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Page 22	<p>1 Q. And what were you looking for?</p> <p>2 A. Looking for evidence of ground contact during</p> <p>3 the rollover.</p> <p>4 Q. And I think in one of your reports you have</p> <p>5 some photographs you talk about ground contact, correct?</p> <p>6 A. That's correct, yes, sir.</p> <p>7 Q. All right. Did those inspections or the</p> <p>8 finding of ground contact provide the basis of any</p> <p>9 opinion?</p> <p>10 A. The opinion that there was some ground</p> <p>11 contact, yes, sir. That's in my -- whatever opinion is</p> <p>12 included in that report. If you will hold on a minute,</p> <p>13 I can be a little more specific. The report of</p> <p>14 September 2nd, 2009, Exhibit Number 4, is the result of</p> <p>15 that inspection or inspections.</p> <p>16 Q. All right.</p> <p>17 A. And just to be correct, I did do two</p> <p>18 inspections. There was one on August 31st, 2007, and</p> <p>19 one on October 28th, 2008.</p> <p>20 Q. I wanted to ask you to clarify something for</p> <p>21 me in reading your prior deposition so that I understand</p> <p>22 what we're talking about here today. There was a</p> <p>23 calculation or measurement done by the trooper, one of</p> <p>24 them which was I think 180 feet. Do you recall that</p> <p>25 number?</p>	Page 24	<p>1 <u>a while. The beginning of the rollover was 25 to 29,</u></p> <p>2 <u>and at the edge of the roadway was 46 to 53 miles per</u></p> <p>3 <u>hour.</u></p> <p>4 Q. <u>Are those the same speed calculations that</u></p> <p>5 <u>you have today?</u></p> <p>6 A. <u>No, sir.</u></p> <p>7 Q. <u>What are your new speed calculations?</u></p> <p>8 A. <u>At the beginning -- oh, I'm sorry. I thought</u></p> <p>9 <u>you were through with the question.</u></p> <p>10 Q. <u>Just go ahead and tell me what your speed</u></p> <p>11 <u>calculations are.</u></p> <p>12 A. <u>Okay. At the beginning of the rollover, the</u></p> <p>13 <u>Raley vehicle was traveling between 21 and 25 miles per</u></p> <p>14 <u>hour. And at the edge of the road it was between 45 and</u></p> <p>15 <u>53.</u></p> <p>16 Q. <u>So, the speed at the edge of the roadway is</u></p> <p>17 <u>essentially the same as your original opinion?</u></p> <p>18 A. <u>Roughly, yes, sir.</u></p> <p>19 Q. <u>And the speed, when the vehicle first begins</u></p> <p>20 <u>to roll on the grass, is now 21 to 25 miles per hour?</u></p> <p>21 A. <u>Yes, sir.</u></p> <p>22 Q. <u>So, you've reduced the speed as the vehicle</u></p> <p>23 <u>began to roll in the grass; is that right?</u></p> <p>24 A. <u>That's correct.</u></p> <p>25 Q. And why did you do that?</p>
Page 23	<p>1 A. Yes, sir.</p> <p>2 Q. And was that from the edge of the roadway to</p> <p>3 the general area of the point of rest of the vehicle; is</p> <p>4 that correct?</p> <p>5 A. It's a little more specific than that. The</p> <p>6 trooper was very clear in my conversation with him that</p> <p>7 he measured from the stripe at the edge of the roadway</p> <p>8 along the path to the vehicle to be 180 feet.</p> <p>9 Q. <u>You've done some roll rate calculations now?</u></p> <p>10 A. <u>Yes, sir.</u></p> <p>11 Q. <u>All right. And we'll get to those in your</u></p> <p>12 <u>Exhibit 2, right?</u></p> <p>13 A. <u>Yes, sir.</u></p> <p>14 Q. <u>All right. Looking at Exhibit Number 1, your</u></p> <p>15 <u>August 9th, '07 report, you learned that Lee DeChant's</u></p> <p>16 <u>photogrammetry was apparently in error; is that correct?</u></p> <p>17 A. <u>That is correct.</u></p> <p>18 Q. <u>And as a result of the errors in his</u></p> <p>19 <u>photogrammetry, you reverted back to your opinions that</u></p> <p>20 <u>you originally expressed in your first deposition,</u></p> <p>21 <u>correct?</u></p> <p>22 A. <u>That's correct.</u></p> <p>23 Q. <u>All right. The speed calculations that you</u></p> <p>24 <u>gave at that time were what, sir. Approximately --</u></p> <p>25 A. <u>Hold on. I just -- I hadn't looked at it in</u></p>	Page 25	<p>1 A. When we were working on the animation, it</p> <p>2 became clear that the vehicle began to roll farther down</p> <p>3 the hill than I originally opined. So, I moved the trip</p> <p>4 points down the hill slightly about 10 feet. And that</p> <p>5 shortened the roll distance and reduced the speed at</p> <p>6 trip.</p> <p>7 Q. So, your trip point is 10 feet further down</p> <p>8 the hill than it was previously?</p> <p>9 A. Yes, sir.</p> <p>10 Q. And what is the basis for your belief that</p> <p>11 the trip point was somewhere different than your</p> <p>12 original opinion?</p> <p>13 A. When we were doing the animation, as the</p> <p>14 process evolves, we have a three-dimensional scene. And</p> <p>15 then we can place a camera down near the bottom of the</p> <p>16 scene. And when we were watching the vehicle as it went</p> <p>17 through the motions that I had originally calculated,</p> <p>18 which was with my original trip point, it seemed clear</p> <p>19 by looking at it that I had it rolling too soon, too far</p> <p>20 up the side of the hill.</p> <p>21 Q. When you said you can place a camera, a</p> <p>22 camera where at, sir?</p> <p>23 A. We placed a camera probably down in the</p> <p>24 region where the -- on the ground in the region where</p> <p>25 the police officer's car was. I don't recall</p>

7 (Pages 22 to 25)

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<p>1 specifically.</p> <p>2 Q. Can you tell me as you sit here where you</p> <p>3 believe the police officer's car was positioned?</p> <p>4 A. No, sir, I can't. Not exactly.</p> <p>5 Q. <u>So, if you lowered -- you lowered the speed</u></p> <p>6 <u>of the -- at the trip point which reduced the distance</u></p> <p>7 <u>of roll which resulted in a different point of rest?</u></p> <p>8 A. <u>Same point of rest, a different place to</u></p> <p>9 <u>begin the roll.</u></p> <p>10 Q. <u>So, your point of rest that you're expressing</u></p> <p>11 <u>today is the same point of rest that you expressed in</u></p> <p>12 <u>your first deposition?</u></p> <p>13 A. <u>Correct, plus we moved the -- the</u></p> <p>14 <u>calculations that I've shown there are the calculations</u></p> <p>15 <u>for the animation. The point of rest for the final</u></p> <p>16 <u>version of the animation was moved another 10 feet,</u></p> <p>17 <u>because that fit best with the video matching of the --</u></p> <p>18 <u>or the three-dimensional matching of the scene photo</u></p> <p>19 <u>from the police vehicle with the animation.</u></p> <p>20 Q. <u>I apologize. Did you finish?</u></p> <p>21 A. <u>I did. Yes, sir. Go ahead.</u></p> <p>22 Q. <u>The animation as originally done didn't match</u></p> <p>23 <u>up, and so you had them revise the animation so it would</u></p> <p>24 <u>fit with your point of rest and trip point, right?</u></p> <p>25 MR. COX: Object to the form.</p>	<p>1 A. Yes, sir.</p> <p>2 Q. And why did you do that?</p> <p>3 A. When I reviewed the original, I don't recall</p> <p>4 if I didn't have the barrel data or I made a mistake,</p> <p>5 but in my original path, the Raley vehicle would have</p> <p>6 clipped the barrels as it headed off the edge of the</p> <p>7 road. So, I moved the path slightly so that it wouldn't</p> <p>8 clip the barrel since it's clear that it didn't.</p> <p>9 Q. Now, how did you determine that the path of</p> <p>10 travel in your first reconstruction that the vehicle</p> <p>11 would have hit those barrels at the northern end of the</p> <p>12 road?</p> <p>13 A. I had some more information from between my</p> <p>14 first reconstruction and the DeChant stuff about where</p> <p>15 the barrels were. I don't recall where I got that. I</p> <p>16 may have gotten that off of an aerial photo.</p> <p>17 Q. Are you saying you had more information about</p> <p>18 the exact location of the barrels?</p> <p>19 A. Yes, sir.</p> <p>20 Q. And so, based on that information, you</p> <p>21 concluded that the barrels were in a position such that</p> <p>22 your first reconstruction was inaccurate?</p> <p>23 A. Concerning the path next to the barrels, yes,</p> <p>24 sir.</p> <p>25 Q. All right. But you can't tell me where you</p>
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<p>1 THE WITNESS: <u>That's not quite right. We</u></p> <p>2 <u>did the original animation, then Mr. Matheson did some</u></p> <p>3 <u>work where he's trying to figure out where the rest</u></p> <p>4 <u>position was from the police photographs. And then in</u></p> <p>5 <u>doing so, he found the rest position that fit the</u></p> <p>6 <u>photographs was about 10 feet from where I had opined</u></p> <p>7 <u>that it was. And I had him move the animation to that</u></p> <p>8 <u>point. The 10 feet is well within the resolution of</u></p> <p>9 <u>what we know about the rest position in this case. So,</u></p> <p>10 <u>I didn't recalculate everything. I just had to move the</u></p> <p>11 <u>animation a little bit.</u></p> <p>12 Q. BY MR. TEAGUE: So, did Mr. Matheson do some</p> <p>13 photogrammetry?</p> <p>14 A. He did some sort of alignments of the</p> <p>15 photograph with the scene information. I don't know</p> <p>16 if that's -- I don't really know if he wants to call it</p> <p>17 photogrammetry. I know that he's going to talk about</p> <p>18 that.</p> <p>19 Q. Sure. And when you say, "photographs,"</p> <p>20 you're talking about a scene from the trooper's auto</p> <p>21 cam?</p> <p>22 A. Yes, sir.</p> <p>23 Q. All right. In your Exhibit I you also talk</p> <p>24 about the -- you've changed the path of travel of the</p> <p>25 Raley vehicle from your original opinion; is that right?</p>	<p>1 got the new information?</p> <p>2 A. No, sir, I don't -- I don't recall. It may</p> <p>3 not have been new information. It's an error that I</p> <p>4 found and I took that opportunity to correct it.</p> <p>5 Q. So, the path of travel of the vehicle is now</p> <p>6 different from your original position?</p> <p>7 A. Slightly, yes, sir.</p> <p>8 Q. And the speed of the vehicle, up to the point</p> <p>9 of the roadway edge, is essentially the same as your</p> <p>10 first opinion?</p> <p>11 A. Yes, sir.</p> <p>12 Q. The speed at the point that it trips is</p> <p>13 lower, correct?</p> <p>14 A. Correct.</p> <p>15 Q. By about five miles an hour?</p> <p>16 A. Four or five. Four or five.</p> <p>17 Q. And the actual point of where the vehicle</p> <p>18 began to trip and roll is 10 feet further down the</p> <p>19 slope?</p> <p>20 A. Yes, sir.</p> <p>21 Q. The animation that was created, what was that</p> <p>22 based off of?</p> <p>23 A. It's based on my reconstruction. I should</p> <p>24 say the motion of the car and the path of the car is</p> <p>25 based on my reconstruction.</p>



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1 feet, and that's the direction.  
2 Q. All right. So, where you show the vehicle in  
3 this particular drawing which is page 4 of Exhibit 2, is  
4 that the point of rest, or does it need to be extended  
5 10 feet further on the drawing?  
6 A. My opinion about the point of rest would be  
7 it's somewhere between where I have it on this drawing  
8 and 10 feet beyond that.  
9 Q. Okay. So, if I understand correctly, the  
10 vehicle traveled or came to a point of rest 10 feet  
11 further along its path in which you had originally  
12 reconstructed?  
13 A. Well, it came to rest somewhere in that area.  
14 So, the drawing you have in front of you is one end of  
15 its rest area, and the animation really shows the other  
16 end.  
17 Q. All right. Looking at -- looking at  
18 Exhibit 2, your August 28th, '07 report.  
19 A. Yes, sir.  
20 Q. Here you say you've refined your  
21 reconstruction and made some modifications to your  
22 original opinions. They are as follows: Number 1, the  
23 distance from the beginning of the roll to the point of  
24 rest, 50 feet.  
25 A. Yes, sir.

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1 Q. Is that correct?  
2 A. Correct.  
3 Q. What was -- what was the distance in your  
4 first deposition from the beginning of the roll to the  
5 point of rest?  
6 A. I think it was 60 feet.  
7 Q. And tell me what information you had that  
8 caused you to reduce the distance of the roll.  
9 A. When I was working with the animator in our  
10 three-dimensional scene, it appeared in viewing it that  
11 the -- I had the vehicle rolling or beginning to roll  
12 too far up the hill, meaning it wasn't to the bottom of  
13 the hill yet when it began to roll at 60 feet.  
14 Q. So, you're saying that your original  
15 reconstruction had it rolling further up the slope?  
16 What's the significance of that?  
17 A. The significance is that when I did more  
18 work, I was able to refine it. And through the more  
19 work and working out specifically generating the details  
20 that are required to generate the animation, I decided  
21 that it was more accurate if the roll began a little  
22 farther down the hill than I originally opined.  
23 Q. I'm trying to understand, if the three-  
24 dimensional video is based on your reconstruction, how  
25 does the animation itself tell you that your

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1 reconstruction is wrong?  
2 A. We have the video and the testimony from the  
3 police officer. We generate an animation, and then when  
4 I view the animation, I look back and watch the  
5 animation and say, "I have it rolling too far up the  
6 hill." It's an opportunity to visualize the three-  
7 dimensional nature of the rollover. So, it's more  
8 accurate -- and you're out of the video screen, so --  
9 Q. I'm sorry.  
10 A. That's quite all right.  
11 Q. Go ahead.  
12 A. So, the -- as part of the process of  
13 generating the detail for the animation, I decided that  
14 it's more correct. It's better if I have it rolling a  
15 little farther down the hill, having it start rolling a  
16 little farther down the hill.  
17 Q. All right. Tell me, though, if the three-  
18 dimensional video is based on your original  
19 reconstruction, how does viewing your original  
20 reconstruction in three-dimension tell you that your  
21 point of trip is somehow inaccurate?  
22 A. If you were standing on the ground out there,  
23 and we brought a car in and drove it through the scene  
24 and rolled it down the side of the hill and videotaped  
25 it, you would look at it and say, "Wow, it should have

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1 started rolling a little farther down the hill."  
2 Because it's not clear in the two-dimensional drawings  
3 in the original reconstruction how far down the hill the  
4 car was when it began to roll. It's hard to visualize.  
5 So, as part of visualizing the reconstruction, I can see  
6 that there's a place that I can improve it a little and  
7 make it a little more accurate.  
8 Q. But you're not suggesting that that animation  
9 is actually the dynamics of the vehicle at the time of  
10 the accident; are you?  
11 A. I'm suggesting that it approximates the  
12 dynamics of the vehicle at the time of the accident.  
13 All the motion is physically correct. We don't know the  
14 exact details of what happened out there.  
15 Q. I guess -- I guess I'm struggling with  
16 understanding how one -- if the animation is based on  
17 your reconstruction, how -- how your reconstruction  
18 viewed in animation tells you your reconstruction is  
19 wrong.  
20 MR. COX: Object to the form; asked and  
21 answered.  
22 THE WITNESS: I'm trying to explain it in  
23 a different way. The animation is physically correct.  
24 The scene is based on three-dimensional measurements.  
25 So, by looking at the scene, I get more information from

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<p>1 the animation. It's the same as if I went out and stood 2 out there and parked a car on the side of the hill and 3 said: Where do I think it started rolling based on what 4 we see in the police video, based on my reconstruction, 5 and based on the car parked there. It's more 6 information.</p> <p>7 Q. BY MR. TEAGUE: <u>All right. Paragraph 2 in</u> 8 <u>Exhibit 2, that is the speed that you attribute to the</u> 9 <u>vehicle when it began rolling being 21 to 25 miles per</u> 10 <u>hour, correct?</u></p> <p>11 A. <u>Correct.</u></p> <p>12 Q. <u>And why is the speed reduced in your refined</u> 13 <u>opinions as opposed to being what it originally was?</u></p> <p>14 A. <u>It's traveling a shorter distance while it</u> 15 <u>rolls. So, the speed at the beginning of the roll is</u> 16 <u>lower.</u></p> <p>17 Q. <u>And that's based on the assumption that it</u> 18 <u>actually began to roll further down the slope than where</u> 19 <u>you originally opined?</u></p> <p>20 A. Yes, sir.</p> <p>21 Q. Paragraph 3, this is the speed of the vehicle 22 when it left the roadway at the edge of the road from 23 the fog line?</p> <p>24 A. Yes, sir.</p> <p>25 Q. That speed is the same as your original</p>	<p>1 or near the bottom of the hill. And we know about where 2 the vehicle came to rest based on -- primarily based on 3 the police officer's measurements, and then also based 4 on looking at the videotape images. So, from the bottom 5 of the hill where it starts to roll to where it came to 6 rest, the distance is approximately 50 feet.</p> <p>7 Q. What's the margin of error with respect to -- 8 or whatever -- what's the terminology you used? You 9 said it was within the -- it was 10 feet within the 10 resolution of reconstruction? I would refer to that as 11 a margin of error; is that a fair statement?</p> <p>12 A. I would -- no. I think I would call it more 13 a region of confidence.</p> <p>14 Q. Okay. What -- what is the region of 15 confidence with respect to the variants on the point of 16 trip? How many feet further up the slope or further 17 down the slope do you think the -- that particular point 18 could vary?</p> <p>19 A. Probably could vary 5 or 10 feet.</p> <p>20 Q. Could it be 20 feet?</p> <p>21 A. Probably not.</p> <p>22 Q. 15 feet?</p> <p>23 A. Don't know. Maybe 15, but probably not. 15 24 would be a significant difference. We'd probably be 25 able to tell that.</p>
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<p>1 opinion?</p> <p>2 A. It's close to the same. Let me check and 3 make sure it's exactly the same. It's a little bit 4 different. Originally, I said 46 to 53. This says 45 5 to 53.</p> <p>6 Q. All right. Is there any significance in the 7 one mile per hour?</p> <p>8 A. No, sir.</p> <p>9 Q. Why do you believe that the vehicle speed as 10 expressed in paragraph 2 there would it begin to roll 11 over -- I'll move back up. And I'm sorry.</p> <p>12 Why do you believe it's at the lower 13 speed now than you originally --</p> <p>14 A. Because it's rolling a shorter distance.</p> <p>15 Q. And I asked you that. Is there anything 16 other than it's rolling a shorter distance?</p> <p>17 A. No, sir.</p> <p>18 Q. Okay. How do you know the exact distance 19 that it rolled?</p> <p>20 A. We don't know the exact distance that it 21 rolled.</p> <p>22 Q. So, you're just assuming that it rolled a 23 shorter distance?</p> <p>24 A. No. It fits the physical evidence. We know 25 that the vehicle began to roll at the bottom of the bill</p>	<p>1 Q. What about the degree of variance with 2 respect to the point of rest? How many feet could that 3 vary?</p> <p>4 A. Probably 10 feet.</p> <p>5 Q. Could it be 20 feet?</p> <p>6 A. Given the work we've done, I don't think so. 7 I don't think it could be that much.</p> <p>8 Q. Well, you know -- you know it's at least 30 9 feet based on what the trooper told you, right?</p> <p>10 A. It's at least what?</p> <p>11 Q. 30 feet.</p> <p>12 A. 30 feet what?</p> <p>13 Q. Well, the difference between what the trooper 14 told you and where you put the vehicle at the point of 15 impact or point of rest is somewhere between probably, 16 what, 5 and 30 feet?</p> <p>17 A. The trooper told me 180 feet, and I have it 18 between 180 and 190 feet.</p> <p>19 Q. But I'm talking about -- I'm not talking 20 about the 180 feet, sir. I'm talking about the general 21 area he described as the point of rest. Because you 22 don't know the exact location, true?</p> <p>23 A. No, we do not. We only have his measurement.</p> <p>24 Q. And his -- where he described for you when 25 you were at the scene is actually 30 feet further</p>

11 (Pages 38 to 41)

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<p>1 south/southwest than where you put the vehicle now, 2 right?</p> <p>3 A. That's true.</p> <p>4 Q. So, the variants based on the trooper and 5 your reconstruction is at least 30 feet, right?</p> <p>6 A. No, I don't think so. He was working from 7 his memory, and he wasn't -- he wasn't using his 8 measurements.</p> <p>9 Q. But I'm talking about, based on the general 10 area he described for you, the point of rest is 11 somewhere at least within a 30 feet difference between 12 what he told you and what you have down as a 13 reconstruction. Because where he told you was 30 feet 14 further south/southwest than where you place the vehicle 15 now, right?</p> <p>16 MR. COX: Object to the form.</p> <p>17 THE WITNESS: He told me it was -- I'm 18 having trouble with the 30 foot number, because I don't 19 remember what the specific is. That sounds about right, 20 but -- yeah, when he was standing out there, he had it 21 south/southwest of where we were.</p> <p>22 Q. BY MR. TEAGUE: <u>All right. Let's move to</u> 23 <u>paragraph 4, Exhibit 2, the roll rate.</u></p> <p>24 A. <u>Yes, sir.</u></p> <p>25 Q. <u>Why did you calculate a roll rate?</u></p>	<p>1 Q. Need to know the speed of vehicle at what 2 point in time?</p> <p>3 A. When it begins to roll.</p> <p>4 Q. All right. And you need to know the distance 5 of the roll from the point it begins to the point of 6 rest?</p> <p>7 A. Yes, sir.</p> <p>8 Q. And do you need to know the number of rolls 9 in order to calculate the roll rate?</p> <p>10 A. Yes, sir.</p> <p>11 Q. Any other factors?</p> <p>12 A. It helps if you know points of contact along 13 the way so that you can orient the vehicle. Those are 14 the -- those are the primary things you need to start to 15 estimate roll rate. The more detail -- can I finish my 16 answer?</p> <p>17 Q. I apologize. I thought you were done.</p> <p>18 A. That's okay. I think there's a time lag 19 between us, too. Primarily, you need what I listed. 20 You can provide more detail if you have more physical 21 evidence to work from.</p> <p>22 Q. Are the calculations of roll rate, are those 23 in Exhibit Number 6?</p> <p>24 A. Yes, sir.</p> <p>25 Q. And what was the roll rate that you</p>
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<p>1 A. <u>Well, you have to calculate a roll behavior</u> 2 <u>of the vehicle for the animation. The roll rate is part</u> 3 <u>of that calculation.</u></p> <p>4 Q. <u>You had not previously done that before?</u></p> <p>5 A. <u>That's correct.</u></p> <p>6 Q. <u>Why did you not do it before?</u></p> <p>7 A. <u>I have not been asked to.</u></p> <p>8 Q. <u>Were you asked to do a roll rate calculation</u> 9 <u>some time after your first -- or second deposition?</u></p> <p>10 A. <u>Yes, sir.</u></p> <p>11 Q. And what was the purpose for it? Was there 12 any purpose for that besides the animation?</p> <p>13 A. Well, it comes out of the animation. I was 14 asked to do the animation, so that would be the purpose.</p> <p>15 Q. Did Mr. Merritt ask you to do that?</p> <p>16 A. Yes, sir.</p> <p>17 Q. Do you remember what he -- specifically what 18 he asked you to do and why?</p> <p>19 A. He asked me to provide the information that 20 Mr. Matheson needed to produce an animation of this 21 crash. The roll behavior is part of that calculation.</p> <p>22 Q. Tell me what factors or information you have 23 to have in order to calculate a roll rate.</p> <p>24 A. Primarily, you need to know speed, the 25 distance that it rolled and the number of rolls.</p>	<p>1 determined for this vehicle?</p> <p>2 A. The average roll rate through the first roll 3 was about 310 degrees per second, and then through the 4 second roll it was a little slower. Hang on. I'll give 5 you the exact number. The second roll was about 185 6 degrees per second.</p> <p>7 Q. In the report you have roll rate was between 8 185 and 310, and you're separating those out, now 9 telling me that 310 is for the first roll, 185 is for 10 the second roll?</p> <p>11 A. Yes, sir, through the -- through the 12 beginning of the roll it's a little higher than the end.</p> <p>13 Q. Have you done anything with respect to Misty 14 Raley, her body dynamics or when she was ejected or 15 anything like that?</p> <p>16 A. Our connection is breaking up. I lost 17 everything after "Misty Raley."</p> <p>18 Q. Can you hear me now?</p> <p>19 A. Yeah, now I can hear you.</p> <p>20 Q. Have you done anything with respect to Misty 21 Raley's eject or evaluating when she was ejected?</p> <p>22 A. No, sir. We're having trouble with our 23 connection. My understanding is the question is: Have 24 I done anything with the dynamics of Misty Raley and her 25 ejection?</p>

12 (Pages 42 to 45)

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1 Q. All right. Let's go to -- let me ask you  
2 real quick. Exhibit Number 7 is an article that you had  
3 not previously read when you gave your original opinions  
4 in your first deposition; is that right?  
5 A. That's correct.  
6 Q. And you since have read it. Is there any  
7 significance it to with respect to your opinions?  
8 A. Yes, sir.  
9 Q. Tell me what those are. What is significant  
10 about this article as to what opinion?  
11 A. I have the opinion that the vehicle rolls  
12 over two times in approximately 50 feet. That article  
13 shows the vehicle can roll over in 25 feet, complete a  
14 revolution in 25 feet.  
15 Q. I have not had an opportunity to review or  
16 see this. So, if you would, tell me, is there more than  
17 one vehicle tested in this article?  
18 A. No, sir. It's a single test presented in  
19 great detail.  
20 Q. What type of vehicle was tested in this one  
21 vehicle test?  
22 A. Hang on. Let me find the article. It's an  
23 SUV. I don't remember which one.  
24 Q. The first page looks like it says a '91 Ford  
25 Explorer XLT and a '97 Toyota Forerunner SR5. Are there

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1 two vehicles that were tested?  
2 A. I thought it was just one, but I haven't read  
3 it in a long time. I'm going to have to look at the  
4 report.  
5 Q. Regardless of the number, they're both SUVs,  
6 right?  
7 A. Yes, sir.  
8 Q. What were the surfaces upon which these tests  
9 were conducted?  
10 A. I believe they were done on asphalt.  
11 Q. Do you know what speeds the vehicles were  
12 traveling at the time of trip?  
13 A. No, sir, not off the top of my head. I'd  
14 have to look at the report. Here we go. There were two  
15 tests. '91 Ford Explorer and '97 Toyota Forerunner.  
16 Q. When did you acquire this article?  
17 A. Sometime before that August 28th report.  
18 It's Volume 2, issue 1 of Collision. They don't put a  
19 date on their cover page.  
20 Q. So, in terms of your opinions, this simply  
21 supports your belief that the vehicle can complete two  
22 revolutions -- or complete a revolution in 25 feet, and  
23 clearly can complete 2 in 50 feet?  
24 A. Yes, sir.  
25 (Comments off the record.)

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1 MR. TEAGUE: Let's take a break real  
2 quick.  
3 (Recess from 11:56 a.m. to 12:02 p.m.)  
4 Q. BY MR. TEAGUE: Exhibit 6, does this contain  
5 all the calculations that you've made in the case?  
6 A. Yes, sir, it does.  
7 Q. Originally, you had calculated two different  
8 speeds. Now you have two speed calculations and a roll  
9 rate. Are there other calculations that we haven't  
10 talked about besides the distance of travel?  
11 A. Well, I have calculated a range of speeds of  
12 the trip, a range of speeds at the edge of the road.  
13 And then I have calculated the position versus time and  
14 roll angle versus time of the vehicle as well as the  
15 position and roll angle versus displacement or distance.  
16 And that's what these calculations are that make up the  
17 rest of Exhibit 6.  
18 Q. And the purpose of those calculations, was  
19 that to provide to Matheson for the animation?  
20 A. Yes, sir.  
21 Q. Exhibit 5 is your September 14th, 2009  
22 report. Did you actually meet with Mr. Matheson?  
23 A. At any time or on -- in September?  
24 Q. At any time.  
25 A. At any time, yes, sir -- yes, sir, I did.

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1 Q. When did you meet with him?  
2 A. In August of '07, I went out to his facility  
3 to work with him to produce the animation.  
4 Q. When was the animation completed?  
5 A. It was pretty much completed when I left at  
6 the end of August. We fine-tuned it since then. So, it  
7 wouldn't have been completed until after September 14th,  
8 2009.  
9 Q. Has it been -- except for moving the 10 feet  
10 relocation, has it been modified farther since September  
11 14th?  
12 A. No, sir.  
13 Q. All right. So, in August of '07, is it fair  
14 to say that the animation was for the most part  
15 completed then?  
16 A. Yes, sir.  
17 Q. Do you have copies of the animation at the  
18 stage it was in August of '07?  
19 A. No, sir. I don't think I kept any.  
20 Q. How was it modified from August of '07 until  
21 September of '09?  
22 A. I think the only differences would be the  
23 shifting at 10 feet that occurred that's discussed in  
24 this letter. And I think that also the other  
25 modification was that since I was there, Mr. Matheson